

**Patrick Byorth***Director, Montana Water Project*

Michelle McGree
Montana Fish, Wildlife & Parks
Habitat Protection Bureau
PO Box 200701
Helena, MT 59620-0701

Transmitted via email to: mmcgree@mt.gov

May 30, 2017

Dear Ms. McGree,

Attached please find a Future Fisheries Improvement Program application packet for Lonny Walker's Dry Creek Channel Restoration Project. This is a collaborative project in partnership with the landowner, Lonny Walker, Trout Unlimited, the Greater Gallatin Watershed Association, the Dry Creek Canal Company and neighboring landowners. The goal of the project is to improve habitat quality in the Walker reach of Dry Creek by increasing pool availability, increasing near bank cover, and restoring woody riparian vegetation. This reach of Dry Creek has been severed by the junction of Dry Creek with the Dry Creek Canal, where the stream was cut off by the canal for decades, seasonally creating a barrier to fish migrations and dewatering the channel. In addition, the channel was straightened to maximize irrigated agriculture.

Several distinct, but related projects are underway in the Dry Creek watershed. Near the headwaters, a group of landowners is devising a project to decrease sedimentation and improve habitat in cooperation with the local watershed group through a 319 grant. Initial feedback from DEQ was positive, but until certain landowner and irrigator cooperation was secured, the 319 grant application was deferred until 2017. The necessary agreements are now in place. A second project associated with the 319 project includes building a flume through which the Dry Creek Canal will flow over the Dry Creek Channel, restoring connectivity above and below the channel. The flume is located on the Walker property. This third proposed project will install pools and woody debris in the existing channel and revegetate the banks in a 700 foot reach below the new flume. With improved connectivity in Dry Creek, the proposed improvement will enhance spawning, rearing, and cover for resident fish and those migrating upstream from the East Gallatin River.

We are requesting \$9,258 of an estimated \$14,878 budget. Along with in-kind services from the landowner, a neighbor has funded a \$2,000 design along with \$420 from Gilliland and Associates, TU has committed \$1,100 in kind for permitting and oversight, and we

expect approximately \$1,720 in-kind volunteer labor for planting. Unfortunately, we were not able to combine funding from the greater flume and habitat restoration projects as match due to complexities in various granting processes. If approved, FFIP funds will pay the majority of on-ground construction costs for this project. The other projects will be funded primarily with private funds and a 319 grant. We hope you and the FFIP Citizens' Panel will find the project worthy of your support. Please feel free to contact me with questions.

Sincerely,



Patrick Byorth

**FUTURE FISHERIES IMPROVEMENT PROGRAM
GRANT APPLICATION**

(Please fill in the highlighted areas)

all sections (IA, IB, IC, etc.) must be addressed or the application will be considered invalid

I. APPLICANT INFORMATION

- A. Applicant Name: Lonny Walker
- B. Mailing Address: PO Box 94
- C. City: Belgrade State: MT Zip: 59714-0094
Telephone: 406 -580-7556 E-mail: drycreekroadfarm@gmail.com
- D. Contact Person: Patrick Byorth
Address if different from Applicant: 321 E. Main Street, Suite 411
City: Bozeman State: MT Zip: 59715
Telephone: 406-548-4830 E-mail: pbyorth@tu.org
- E. Landowner and/or Lessee Name (if other than Applicant): Lonny Walker
Mailing Address: _____
City: _____ State: _____ Zip: _____
Telephone: _____ E-mail: _____

II. PROJECT INFORMATION*

- A. Project Name: Dry Creek Channel Restoration
River, stream, or lake: Dry Creek
Location: Township: 1N Range: 4E Section: 3
Latitude: 45.874607 Longitude: -110.207877 *within project (decimal degrees)*
County: Gallatin
- B. Purpose of Project: _____

Dry Creek is a tributary of the East Gallatin River draining the Horseshoe Hills North of Belgrade, Montana. The stream primarily supports brown trout, but mountain whitefish, brook and rainbow trout are present. The Dry Creek fishery suffers under several limiting factors including channelization due to an old railroad grade and for agriculture, sedimentation, irrigation withdrawals, and is intercepted by the Dry Creek Canal which likely acts as a passage barrier. Fish migrating upstream in Dry Creek are blocked at the canal, and any downstream migrants are likely lost into the canal. A group of concerned landowners and their partners along Dry Creek are undertaking a watershed restoration effort to restore fisheries passage, improve water and habitat quality, and restore stream function. This particular project will improve the habitat of Dry Creek immediately downstream of a new flume at the Dry Creek Ditch Company Canal that will restore connectivity historically disrupted when the canal was constructed. The canal intercepts Dry Creek, reducing stream flow below, blocking migrations, and causing entrainment of fishes.

C. Brief Project Description:

Efforts to improve the fishery of Dry Creek are underway by several landowners and partners. An effort to decrease sedimentation, improve water quality, and restore fish habitat in headwaters reaches will seek a 319 grant in the next cycle. Another independent, but related project will build a flume for the Dry Creek Canal over Dry Creek on the Walker property to reconnect upper and lower reaches and enable up and downstream fish migrations without blockage by the canal. While the flume will be built on the Walker property, that project will not improve fish habitat downstream of the flume due to lack of funds. Since construction of the flume will change the grade of Dry Creek at the flume, an opportunity exists to improve stream habitat in the vicinity of the stream/canal intersection. This project will improve spawning, rearing, and resident trout habitat by re-naturalizing the historic channelized reach just downstream of the flume. The goal is to work within the existing channel footprint to establish more pools and improve riparian habitat in a 700 ft reach downstream of the siphon. Please see the attached conceptual plan and project narrative for additional information.

D. Length of stream or size of lake that will be treated: Approximately 700 feet

E. Project Budget:

Grant Request (Dollars): \$ 9,258.00

Contribution by Applicant (Dollars): \$ _____ In-kind \$ 350.00
(salaries of government employees are not considered as matching contributions)

Contribution from other Sources (Dollars): \$ 2000.00 In-kind \$ 3,270.00
(attach verification - See page 2 budget template)

Total Project Cost: \$ 14,878.00

F. Attach itemized (line item) budget – see template

G. Attach specific project plans, detailed sketches, plan views, photographs, maps, evidence of landowner consent, evidence of public support and fish biologist support, and/or other information necessary to evaluate the merits of the project. If project involves water leasing or water salvage complete supplemental questionnaire (fwp.mt.gov/habitat/futurefisheries/supplement2.doc).

H. Attach land management and maintenance plans that will ensure protection of the reclaimed area.

III. PROJECT BENEFITS*

A. What species of fish will benefit from this project?:

Primarily brown trout and mountain whitefish, although rainbow and brook trout are present.

B. How will the project protect or enhance wild fish habitat?:

By restoring pool and near bank habitats, and establishing woody riparian vegetation, fish will have increased spawning and rearing habitat, but also resting habitat as they approach and migrate past the new flume.

C. Will the project improve fish populations and/or fishing? To what extent?:

The project will improve fish populations and fishing, especially in the East Gallatin River. With improved access to spawning habitats, cooler water, and holding and rearing cover, trout populations in the East Gallatin River should increase, or at least remain more stable during drought periods.

D. Will the project increase public fishing opportunity for wild fish and, if so, how?:

Yes, by improving connectivity to more spawning habitat and restoring more consistent stream flows, improved recruitment should increase fish populations in the East Gallatin River which will benefit the popular nearby public fishing opportunities. Dry Creek will have improved fishing with improved habitat, but as a minor tributary does not attract much public fishing.

E. The project agreement includes a 20-year maintenance commitment. Please discuss your ability to meet this commitment.

The landowner has committed to long-term maintenance of planted riparian material and assistance with installation. The property is not grazed and therefore does not need riparian fencing.

F. What was the cause of habitat degradation in the area of this project and how will the project correct the cause?:

The lower Dry Creek channel was moved and channelized for agricultural reasons decades ago. In particular, the channel was straightened to increase farmable acres and to accommodate the canal. The straightened channel at the Dry Creek canal was designed to act as an irrigation blow-off. Once the flume is built to restore fish passage, this project will improve conditions in this straightened, uniform channel to enhance pool habitats and bankside cover.

G. What public benefits will be realized from this project?:

Improved connectivity between lower and upper Dry Creek will improve fish migrations and increase recruitment. Better holding cover and resting sites near the siphon will make the passage structure more attractive for migrating fish. Better access to upstream spawning habitat will improve fish numbers for the popular public fishery in the East Gallatin River. Finally, in late summer, fish will have access to cooler water upstream, where currently is just a trickle.

H. Will the project interfere with water or property rights of adjacent landowners? (explain):

No, to the contrary, the construction of a flume within the canal easement will disturb the Walker property and the change in stream grade requires changes in the channel below. There are no water right implications, as the Dry Creek Canal does not have water rights in Dry Creek.

- I. Will the project result in the development of commercial recreational use on the site?: (explain):

No.

- J. Is this project associated with the reclamation of past mining activity?:

No.

Each approved project sponsor must enter into a written agreement with the Department specifying terms and duration of the project.

IV. AUTHORIZING STATEMENT

I (we) hereby declare that the information and all statements to this application are true, complete, and accurate to the best of my (our) knowledge and that the project or activity complies with rules of the Future Fisheries Improvement Program.

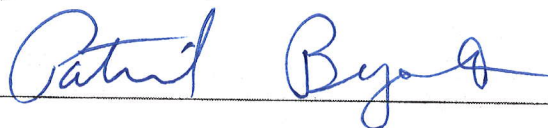
Applicant Signature:



Date:

5-30-17

Sponsor (if applicable):



5/31/17

*Highlighted boxes will automatically expand.

Mail To: Montana Fish, Wildlife & Parks
Habitat Protection Bureau
PO Box 200701
Helena, MT 59620-0701

E-mail To: Michelle McGree
mmcgree@mt.gov
(electronic submissions MUST be signed)

Incomplete or late applications will be rejected and returned to applicant.
Applications may be rejected if this form is modified.

Applications may be submitted at anytime, but must be signed and received by the Future Fisheries Program Officer in Helena before December 1 and June 1 of each year to be considered for the subsequent funding period.

Dry Creek channel restoration
BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

Both tables must be completed or the application will be returned

WORK ITEMS (ITEMIZE BY CATEGORY)	NUMBER OF UNITS	UNIT DESCRIPTION*	COST/UNIT	TOTAL COST	CONTRIBUTIONS			
					FUTURE FISHERIES REQUEST	IN-KIND SERVICES**	IN-KIND CASH	TOTAL
Personnel***								
Survey				\$ -				\$ -
Design	22	110	\$2,420.00	\$2,420.00		420.00	\$2,000	\$ 2,420.00
				\$ -				\$ -
Permitting	10	hours	\$55.00	\$ 550.00		550.00		\$ 550.00
Wetland Delineation	1		\$2,500.00	\$2,500	\$2,500			\$2,500
Oversight	10	hours	\$55.00	\$ 550.00		550.00		\$ 550.00
				\$ -				\$ -
			Sub-Total	\$ 6,020.00	\$ 2,500	\$ 1,520.00	\$ 2,000.00	\$ 6,020.00
Travel								
Mileage				\$ -				\$ -
Per diem				\$ -				\$ -
			Sub-Total	\$ -	\$ -	\$ -	\$ -	\$ -
Construction Materials****								
LWD	15		\$0.00	\$ -				\$ -
5 -gal shrub willow	30		\$18.00	\$ 540.00	540.00			\$ 540.00
7 - gal aspen containers	34		\$55.00	\$ 1,870.00	1,870.00			\$ 1,870.00
5-gal chokecherry	31		\$18.00	\$ 558.00	558.00			\$ 558.00
5-gal pacific willow	14		\$18.00	\$ 252.00	252.00			\$ 252.00
cages and staking	1		\$500.00	\$ 1,378.00	1,378.00			\$ 1,378.00
				\$ -				\$ -
				\$ -				\$ -
				\$ -				\$ -
			Sub-Total	\$ 4,598.00	\$ 4,598.00	\$ -	\$ -	\$ 4,598.00
Equipment and Labor								
Excavator and operator	12	hours	\$130.00	\$ 1,560.00	1,560.00			\$ 1,560.00
Labor	60	hours	\$35.00	\$ 2,100.00		2,100.00		\$ 2,100.00
				\$ -				\$ -
				\$ -				\$ -
				\$ -				\$ -
				\$ -				\$ -
			Sub-Total	\$ 3,660.00	\$ 1,560.00	\$ 2,100.00	\$ -	\$ 3,660.00
Mobilization								

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

Excavator	1		\$600.00	\$ 600.00	600.00			\$ 600.00
				\$ -				\$ -
				\$ -				\$ -
				\$ -				\$ -
			Sub-Total	\$ 600.00	\$ 600.00	\$ -	\$ -	\$ 600.00
TOTALS				\$ 14,878.00	\$ 9,258.00	\$ 3,620.00	\$ 2,000.00	\$ 14,878.00

OTHER REQUIREMENTS:

All of the columns in the budget table and the matching contribution table MUST be completed appropriately or the application will be invalid. Please see the example budget sheet for additional clarification.

*Units = feet, hours, inches, etc. Do not use lump sum unless there is no other way to describe the costs.

**Can include in-kind materials. Justification for in-kind labor (e.g. hourly rates used for calculations). Describe here or in text.

Reminder: Government salaries cannot be used as in-kind match

***The Review Panel suggests that design and oversight costs associated with a proposed project not exceed 15% of the total project budget. If design and oversight costs are in excess of 15%, applications must include a minimum of two competitive bids for the cost of undertaking the project.

****The Review Panel recommends a maximum fencing cost of \$1.50 per foot. Additional costs may be the responsibility of the applicant and/or partners.

MATCHING CONTRIBUTIONS (do not include requested funds)

CONTRIBUTOR	IN-KIND SERVICE	IN-KIND CASH	TOTAL	Secured? (Y/N)
Steve Carlson	\$ -	\$ 2,000.00	\$ 2,000.00	yes
Trout Unlimited	\$ 1,100.00	\$ -	\$ 1,100.00	yes
Lonny Walker	\$ 350.00	\$ -	\$ 350.00	yes
Gillilan Associates	\$ 420.00	\$ -	\$ 420.00	yes
Volunteer Labor	\$ 1,750.00	\$ -	\$ 1,750.00	N
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
	\$ -	\$ -	\$ -	
TOTALS	\$ 3,620.00	\$ 2,000.00	\$ 5,620.00	

Dry Creek – Walker Property

To: Pat Byorth, (TU)
From: Scott Gillilan, GAI
Date: May 26, 2017
Re: **Project Narrative for Future Fisheries Grant Application**
CC: Lonny Walker

The following memo describes a proposed project on Dry Creek, (near Belgrade, MT), to improve in-stream and riparian habitat in a 700 foot reach of channel that has been historically straightened. This project is in conjunction with a proposed DEQ 319 funded project that will 1) install a flume in the Cry Creek Canal to remediate the current condition where the entire flow of Dry Creek is captured by the canal during irrigation season and; 2) remediate extensive erosion on approximately 1 mile of banklines approximately 3 miles upstream of the Walker Property.

A complete 319 application addressing the flume and upstream bank erosion was prepared by Greater Gallatin Watershed Council, (GGWC) in 2016 that received positive feedback from the 319 review committee. However, GGWC decided to withdraw the grant application just prior to final submittals in order to finalize necessary agreements between Dry Creek Canal Company, the upstream landowner and the Walkers. These agreements are now in place.

Project Overview

The Walker project is located northeast of Manhattan, MT just south of West Dry Creek Road (Figure 1). Based on review of aerial photography it appears Dry Creek on the Walker property was relocated to its current position after WW II. Existing ground indicators suggest that historically Dry Creek was a multi-threaded channel on a gentle alluvial fan. The channel relocation resulted in almost entirely straight and entrenched condition with spoils berms on both banks.

During irrigation season the Dry Creek Canal captures all flows of Dry Creek on the property (though the canal company does not have diversion rights for this water), resulting in complete severance of connectivity with the East Gallatin River approximately 1.5 miles downstream. In



Figure 1. Location of proposed Walker Property project and relationship to its confluence with the East Gallatin River, the Dry Creek Canal, and the proposed upstream 319 grant funded project.

addition to being a fish passage barrier the ditch also entrains/captures trout and other aquatic species.

The GGWC is re-submitting a 319 grant application in 2017. The proposed project on the Walker Property does not specifically address 319 related activities so the greater planning team concluded this project would be suitable for a Future Fisheries application. If successfully funded, the entire project will be a collaboration of 2 private landowners and the Dry Creek Canal Company.

Proposed Project Details

For project cost purposes a decision was made not to re-meander the current channel and instead focus on improving some instream habitat and a relatively dense riparian planting plan. Because there is abundant woody debris deadfall on the property this was chosen as the structure-type that should: 1) provide local scour and pool cover; 2) hydraulic diversity at both high and low flow periods and; appear natural. The channel enhancements are indicated in Figure 3.

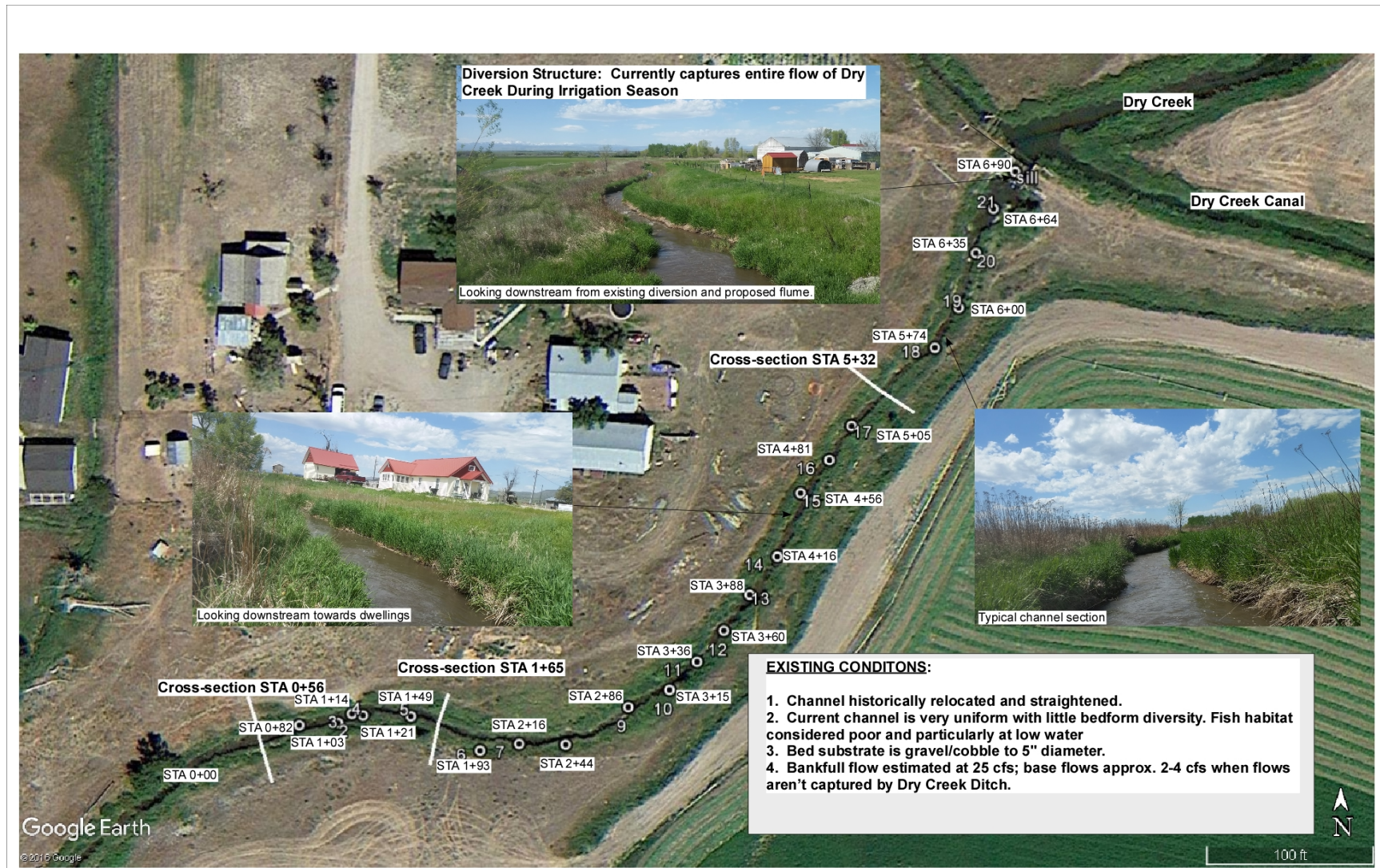


Figure 2. Project plan view map.

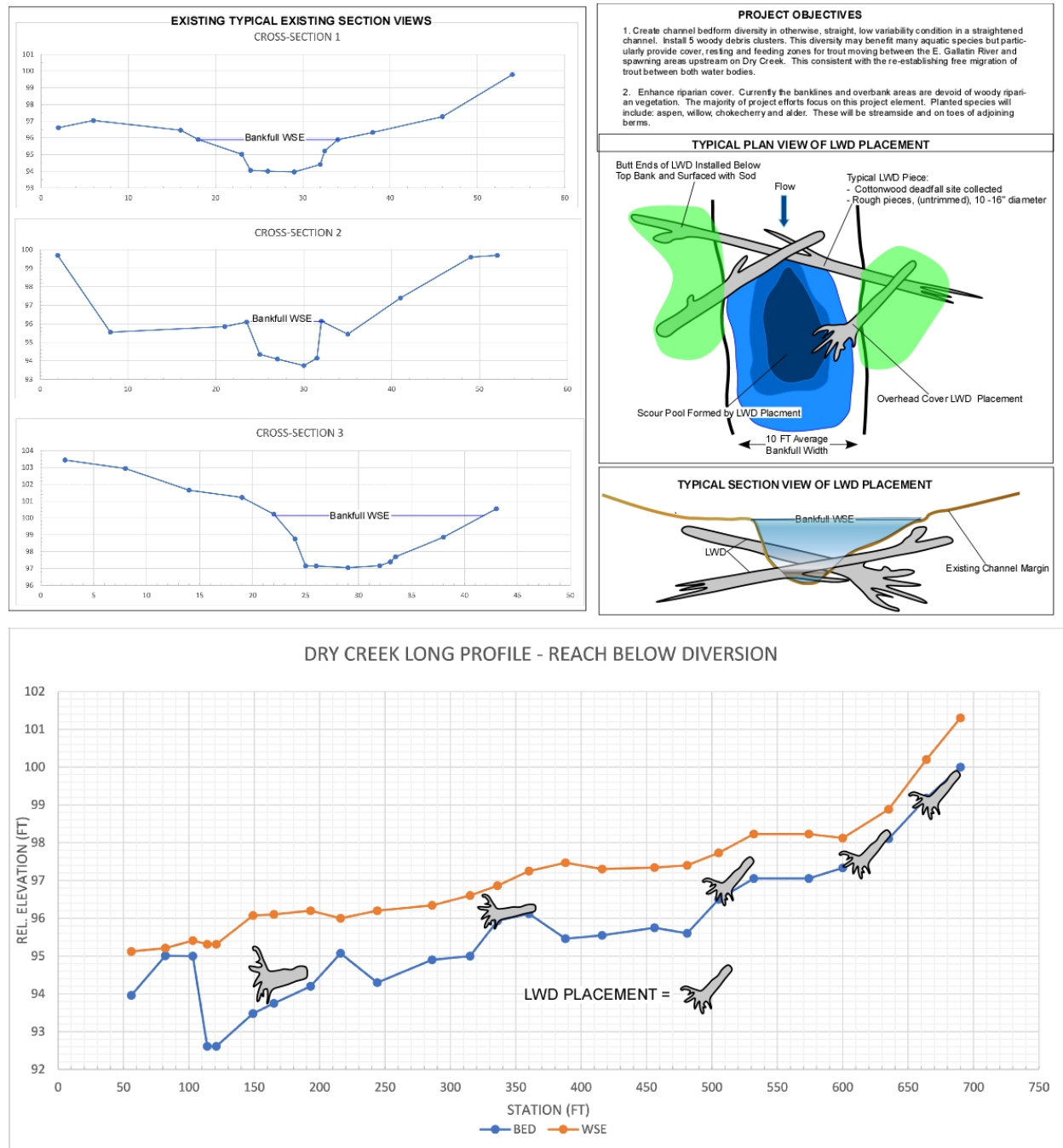


Figure 3. Existing channel sections, channel grade and proposed LWD placements.

Riparian Planting Plan

Vegetation along the Dry Creek stream corridor is currently comprised of dense stands of smooth brome and reed canary grass with a few sedges and rushes in the lower floodplain areas. Currently, there are a few small trees throughout the proposed channel enhancement area. Due to the narrow floodplain area and limited areas for willow plantings, we are

proposing a combination of willow, aspen and chokecherry to establish cover along the stream corridor.

Please see Figure 4. Aspen and chokecherry will be planted on along the upper streambanks where the ground is higher and unsuitable for willows. These species were chosen for their heartiness, rapid growth and suckering. Chokecherry was also chosen to provide species diversity and bird habitat.

Pacific willow and shrub willows will be planted in lower-lying floodplain areas where the roots can access the water table. Pacific willows were chosen specifically for their potential to grow into larger trees, while the shrub willows were chosen for shading and habitat purposes.

Trees and shrubs will be planted into weed matting to increase mortality and decrease competition with surrounding grass species. Trees and shrubs will then be fenced to protect from wildlife impacts.

Figure 4 shows the proposed channel enhancement area with the planting areas. Overall, we are proposing to plant 100 tree and shrubs along the riparian corridor at the Walker dry Creek location. Table 1 shows the costs associated with the plantings.



Walker Dry Creek

Tree and Shrub Cost Estimate

Common Name	Botanical Name	Quantity	Container Size	Cost Each	Total Cost
SITE 1					
Aspen	<i>Populus tremuloides</i>	3	7 Gal	\$ 55.00	\$ 165.00
Cokecherry	<i>Prunus virginiana</i>	3	5 Gal	\$ 18.00	\$ 54.00
Site 2					
Aspen	<i>Populus tremuloides</i>	3	7 Gal	\$ 55.00	\$ 165.00
Cokecherry	<i>Prunus virginiana</i>	5	5 Gal	\$ 18.00	\$ 90.00
Pacific Willow	<i>Salix lasiandra</i>	3	5 Gal	\$ 18.00	\$ 54.00
Shrub Willow	various species	12	5 Gal	\$ 18.00	\$ 216.00
Site 3					
Aspen	<i>Populus tremuloides</i>	3	7 Gal	\$ 55.00	\$ 165.00
Cokecherry	<i>Prunus virginiana</i>	3	5 Gal	\$ 18.00	\$ 54.00
Shrub willow	various species	2	5 Gal	\$ 18.00	\$ 36.00
Site 4					
Aspen	<i>Populus tremuloides</i>	7	7 Gal	\$ 6.00	\$42.00
Cokecherry	<i>Prunus virginiana</i>	4	5 Gal	\$ 6.00	\$24.00
Pacific Willow	<i>Salix lasiandra</i>	1	5 Gal	\$ 18.00	\$ 18.00
Shrub Willow	various species	5	5 Gal	\$ 18.00	\$ 90.00
Site 5					
Aspen	<i>Populus tremuloides</i>	3	7 Gal	\$ 55.00	\$ 165.00
Cokecherry	<i>Prunus virginiana</i>	3	5 Gal	\$ 18.00	\$ 54.00
Site 6					
Aspen	<i>Populus tremuloides</i>	4	7 Gal	\$ 55.00	\$ 18.00
Cokecherry	<i>Prunus virginiana</i>	2	5 Gal	\$ 18.00	\$ 42.00
Site 7					
Aspen	<i>Populus tremuloides</i>	4	7 Gal	\$ 55.00	\$ 220.00
Cokecherry	<i>Prunus virginiana</i>	5	5 Gal	\$ 18.00	\$ 90.00
Shrub Willow	various species	4	5 Gal	\$ 18.00	\$ 72.00
Site 8					
Aspen	<i>Populus tremuloides</i>	4	7 Gal	\$ 55.00	\$ 220.00
Cokecherry	<i>Prunus virginiana</i>	4	5 Gal	\$ 18.00	\$ 72.00
Pacific Willow	<i>Salix lasiandra</i>	1	5 Gal	\$ 18.00	\$ 18.00
Shrub Willow	various species	4	5 Gal	\$ 18.00	\$ 72.00
Site 9					
Aspen	<i>Populus tremuloides</i>	3	7 Gal	\$ 55.00	\$ 165.00
Cokecherry	<i>Prunus virginiana</i>	2	5 Gal	\$ 18.00	\$ 36.00
Shrub Willow	various species	3	5 Gal	\$ 18.00	\$ 54.00
Additional Planting Materials					
Weed Mat		2	each	\$ 142.00	\$ 284.00
Staples		2	each	\$ 60.00	\$ 120.00
Posts		100	each	\$ 3.99	\$ 399.00
Fencing		5	each	\$ 114.99	\$ 574.95
Total Plants:		209		Total Cost:	\$ 3,848.95